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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,401

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EXAMINER

RIPA, BRYAN D

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/527,401	<b>Applicant(s)</b> KAWANAMI ET AL.	
	<b>Examiner</b> BRYAN D. RIPA	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/6/05; 3/27/08</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

1. Claims 3 and 12 are objected to because of the following informality. Each claim appears to mistakenly have the claim limitation requiring the "propargyl group content of 10 to 495 millimoles" recited twice. It is suggested that applicant remove one of the references to this limitation.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6, 9, 10 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More specifically, claims 6 and 18-20 recites the limitation "the epoxy resin" in the penultimate line of the respective claims. There is insufficient antecedent basis for this limitation in the claim.

Furthermore, claims 9 and 10 recites the limitation "the article to be coated" in the last line of the respective claims. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 and 12-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al., (U.S. Pub. No. 2002/0098363) (hereinafter referred to as "SAKAMOTO").

Regarding claim 1, SAKAMOTO teaches a method of coating capable of coating an electric wire (see ¶15) comprising a cationic electrocoating with a cationic electrodeposition coating composition (see ¶11-13 teaching the method of coating using a cationic electrocoating with a sulfonium group-containing resin, i.e. an electrodeposition coating composition), wherein the cationic electrodeposition coating

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composition contains a resin composition having a hydratable functional group reducible directly by an electron and results in forming a passive coat (see ¶¶34 and ¶35 teaching the sulfonium group being a hydratable functional group that is reduced by the electrical current thereby forming a coating).

Please note, the examiner is interpreting the preamble of the instant claim as merely reciting the purpose or intended use of the process, since the body of the claim does not depend on the preamble for completeness and the process steps do not result in any manipulative differences due to the statements in the preamble. See MPEP § 2111.02.

Regarding claim 2, SAKAMOTO teaches the method of coating wherein the resin composition is a sulfonium group and propargyl group-containing resin (see ¶¶61 and ¶67 teaching the resin composition A1 having a sulfonium group and a propargyl group).

Regarding claims 3 and 12, SAKAMOTO teaches the method of coating wherein the resin composition has a sulfonium group content of 5 to 400 millimoles (see ¶44 teaching a sulfonium group content of 10 to 150 millimoles), a propargyl group content of 10 to 495 millimoles (see ¶77 teaching a propargyl group content of 20 to 375 millimoles) and a total content of the sulfonium and propargyl groups of not more than 500 millimoles per 100 grams of the solid matter in the resin composition (see ¶82

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teaching the total content not being more than 400 millimole per 100 grams of the resin solid matter).

Regarding claims 4 and 13-14, SAKAMOTO teaches the method of coating wherein the resin composition has a sulfonium group content of 5 to 250 millimoles (see ¶44 teaching a sulfonium group content of 10 to 150 millimoles), a propargyl group content of 20 to 395 millimoles (see ¶77 teaching a propargyl group content of 20 to 375 millimoles) and a total content of the sulfonium and propargyl groups of not more than 400 millimoles per 100 grams of the solid matter in the resin composition (see ¶82 teaching the total content not being more than 400 millimole per 100 grams of the resin solid matter).

Regarding claims 5 and 15-17, SAKAMOTO teaches the method of coating wherein the resin composition has an epoxy resin as a skeleton (see ¶74 teaching the use of an epoxy resin skeleton).

Regarding claims 6 and 18-20, SAKAMOTO teaches the method of coating wherein the epoxy resin is a novolak cresol epoxy resin or a novolak phenol epoxy resin and has a number average molecular weight of 700 to 5000 (see ¶45 teaching the use of a novolak phenol-based epoxy resin with a number average molecular weight of 700 to 5000).

Regarding claim 7, SAKAMOTO teaches the method of coating wherein the cationic electrocoating is carried out using a cationic electrocoating apparatus comprising an electrodeposition means (see ¶227 teaching the immersing of the article to be coated in the electrodeposition coating), a washing means (see ¶236 teaching the washing with water prior to baking and after the electrodeposition), and a heating means in that order (see ¶236 teaching the curing by baking).

Please note, the examiner is interpreting the “electrodeposition means”, the “washing means”, and the “heating means” as not invoking 35 U.S.C. 112 6<sup>th</sup> paragraph. See MPEP § 2181.

Regarding claim 8, SAKAMOTO teaches the method of coating wherein the electrodeposition means is one in which an article to be coated is immersed in an electrodeposition bath for 0.1 to 10 seconds (see ¶227 and ¶228 teaching the immersing of the article for 10 seconds).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over SAKAMOTO in view of Lupinski et al., (U.S. Pat. No. 3,850,773) (hereinafter referred to as "LUPINSKI").



Regarding claims 9 and 10, SAKAMOTO does not explicitly teach the use of the coating method wherein the article to be coated is a square electric wire having four square edges, i.e. at least one edge.

However, LUPINSKI teaches the electrodeposition of an insulating polymer in order to make an insulated conductor, i.e. a coated electrical wire (see col. 3 lines 39-55). Furthermore, LUPINSKI teaches the benefit of using such a coating process for square shaped wires since it avoids problems associated with other prior art processes (see col. 1 line 33-col. 2 line 11).

In addition, SAKAMOTO teaches the first electrodeposition coating containing the sulfonium groups to form a non-conductor and an insulator after electrodeposition (see ¶234 teaching the first electrodeposition coating containing the sulfonium groups forming a highly insulating coating).

Consequently, as shown by LUPINSKI, a person of ordinary skill in the art would accordingly have recognized the use of the electrodeposition method of SAKAMOTO including the specific resin compound to facilitate the formation of an insulating coating on square wires.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the electrodeposition method of SAKAMOTO to provide an insulating coating on square wires as taught by LUPINSKI.

Regarding claim 11, SAKAMOTO as modified by LUPINSKI teach the formation of an insulated wire having all the structural limitations as obtained by the method as claimed.

Please note, claim 11 is a product by process claim. As a result, the determination of patentability is based upon the apparatus structure itself. The patentability of a product or apparatus does not depend on its method of production or formation. See MPEP § 2113.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claim 1-6 and 12-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U. S. Patent No. 6,440,286. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the features of the present claims are present within the claims of the '286 patent.

6. Claims 1-8 and 12-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 18 of U.S. Patent No. 6,790,329 in view of Patent No. 6,423,765.

Regarding claims 1, 2, 5, and 15-17 of the instant application, claims 1-4 and 18 of the '329 patent claim a method of forming a coating film comprising a cationic electrodeposition process wherein the cationic electrodeposition coating composition has a hydratable functional group (see claim 1 requiring the coating resin composition to contain a sulfonium group) and a propargyl group (see claims 2 and 3 requiring the propargyl group). In addition, claim 4 of the '329 patent requires the use of an epoxy resin as a skeleton. Finally, claim 18 of the '329 patent requires the electrodeposition for a period of 10 seconds.

Regarding claims 3, 4, 6-8, 12-14, and 18-20 of the instant application, the '765 patent teaches the claimed concentrations of the sulfonium and propargyl group content in the resin composition (see examples 1 and 2 in table 1). Moreover, the '765 patent teaches the cationic electrocoating process wherein the epoxy resin is a novolak phenyl type epoxy resin with an average molecular weight of 500 to 5,000 (see col. 6 lines 31-

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46). Additionally, the '765 patent teaches the cationic electrocoating being carried out by an apparatus comprising an electrodeposition means, a washing means and a heating means in that order (see col. 10 lines 53-57).

Moreover, it would have been with the ambit of one having ordinary skill in the art to use the specific compositions as taught in the '765 patent in the claimed process of the '329 patent.

7. Claims 9-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 and 18 of the '329 patent in view of the '765 patent and further in view of LUPINSKI.

Regarding claims 9-11 of the instant application, as noted previously, one of ordinary skill in the art would have been motivated to use the cationic electrodeposition process for the coating of a square electric wire (see discussion above with respect to the rejection of claims 9-11).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN D. RIPA whose telephone number is 571-270-7875. The examiner can normally be reached on Monday to Friday, 9:00 AM to 5:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/B. D. R./  
Examiner, Art Unit 1795

/Brian J. Sines/  
Supervisory Patent Examiner, Art Unit 1795